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ABSTRACT

This paper reviews literature relating to the educational needs of children with severe disabilities and describes methods to facilitate inclusion of these children into integrated educational settings. The paper defines use of the term "learners with severe disabilities" and outlines trends in placement of these learners. Components of a quality education are identified, including its age appropriateness, specific objectives, functional activities, consistent cue hierarchy, systematic data-based instruction, periodic program review, community-based instruction, integrated delivery of related services, interactions with nondisabled peers, transition planning, and home-school partnership. A synthesis of the literature on assessment of learners with severe disabilities emphasizes the use of ecological inventories and transdisciplinary models. Modifications designed to facilitate inclusion of learners with severe disabilities in integrated educational settings are then discussed, including improved accessibility, increased teacher familiarity with specialized needs of students with severe disabilities, and others. (Includes 21 references.) (JDD)

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Educating Students with Severe Disabilities in General Education Settings: A Resource Manual

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Abstract

The purpose of this paper is to provide a resource manual for teachers and related service personnel regarding the education of children with severe disabilities in general education settings. Included in this manual is a synthesis of literature relating to the educational needs of children with severe disabilities and methods to facilitate inclusion of these children into integrated educational settings.

Educating Students with Severe Disabilities in General Education Settings: A Resource Manual

Introduction

The practice of integrating students with disabilities into general education settings, most commonly referred to by many as mainstreaming, has traditionally focused it's efforts on students with mild and/or moderate disabilities. Not until recently has the practice of integrating students with severe disabilities occurred. The integration of students with severe disabilities known as inclusion, allows for children with severe disabilities to be educated in their neighborhood schools with non-disabled same aged peers, and access to normalized educational experiences (Giangreco, 1989; Villa & Thousand, 1988; York & Vandercook, 1990).

The concept of inclusive schooling has been ever increasing throughout the United States and Canada (York & Vandercook, 1990) and has perhaps been most successfully operationalized in the state of Vermont. Many school districts in the state of Vermont have fully implemented the practice of inclsuion and have generated much of the existing data on implementation strategies and outcomes

(Giangreco, Edelman, & Dennis, 1991; Thousand & Burchard, 1990; Thousand, Fox, Reid, Godek, Williams, & Fox, 1986). Although much has been disseminated from these projects there is still a need for more information relating to the implementation of such programs.

In the state of South Dakota, where such a statewide systems change is presently in progress and other states currently in the developing stages of systems change, school districts and their personnel are in need of information which will assist them in designing and implementing "best practices" related to inclusion (Wheeler & Reetz, 1991). Many general and special educators, administrators, and related service personnel have little or no training in the area of severe disabilties nor the concepts of collaboration, consultation, and team building. The present resource manual attempts to fill a portion of this void by providing the reader with a systematic overview of education for learners with severe disabilities and a synthesis of selected readings which examine the inclusion of these students into general education settings.

Definition of Learners with Severe Disabilities

Learners with severe disabilities are generally considered to be those children who exhibit severe intellectual disabilities and or one or more other types of disabling conditions (i.e., deaf, blind, communication, physical, behavioral, health impaired). Due to the intensity of their disabilities these children often pose a significant challenge to professionals engaged in the education of these children (Orelove & Sobsey, 1987). This group of children constitutes approximately .05% of the school age population and are often referred to as a low incidence disability group (Snell, 1987).

Educating Learners with Severe Disabilities

Traditionally it was considered an appropriate education for learners with severe disabilities to be educated in special schools or classrooms segregated from the rest of society. This practice has diminished somewhat with the movement toward inclusion and heterogeneous schooling for all children. In attempting to provide educational services to children with severe disabilities care must be given to ensure that educational programming is of the highest quality and promotes the individualized educational needs of the learner.

Bates, Renzaglia, and Wehman (1981) offerred 12 characteristics of an approriate education for students with severe disabilities. These include the following components (a) age appropriate curriculum and materials; (b) specific objectives; (c) functional activities; (d) consistent cue hierarchy; (e) data collection and charting; (f) periodic revision of the IEP; (g) classroom schedule; (h) instruction outside the classroom; (i) integrated therapy; (j) instruction in small groups; (k) interaction with nondisabled; and (l) family involvement. A recent study conducted by Williams, Fox, Thousand, and Fox (1990) identified "best educational practices" and their level of acceptance and implementation for students with severe disabilities in Vermont. The nine best practices which were identified included: (a) age appropriate placement in local schools; (b) integrated delivery of services; (c) social integration; (d) transition planning; (e) community-based training; (f) curricular expectations; (g) systematic data-based instruction; (h) home-school partnerships; and (i) systematic program evaluation. At this juncture further elaboration is needed to clarify each of these components for the reader.

Part I

Components of a Quality Education for Learners with Severe Disabilities

Age Appropriate

Age appropriate refers to structuring curriculum and educational placement based upon the student's chronological age as opposed to mental age. As an example, it would not be age appropriate to place a sixteen year old youngster who is severely intellectuallyly disabled into a classroom with pre-schoolers. The curriculum, classroom placement, and instructional environment should all embody what is typical for children of that chronological age group. As Williams et al (1990) have identified, such a placement should also be within the student's local public school. Such a practice reflects the idea of children attending neighborhood schools rather than being sent to special schools far from their locales which serve only children with severe disabilities.

Specific Objectives

A necessary component to an educational program for students with severe disabilities are specific objectives as part of the student's individualized educational plan (IEP).

As Bates et al., (1981) indicate these objectives should reflect learning conditions, observable behavior or performance, and performance criterion. Objectives should be meaningful to the individual student and based upon careful assessment of the student, his/her environment(s), and parental input. The formation of objectives derived from pre-packaged curriculum guides or developmental checklists should be avoided at all costs. Such pre-packaged materials are not learner or setting specific enough to fully benefit the individual needs of the learner with severe disabilities.

Functional Activities

This term refers to teaching students with severe disabilities skills and behaviors that are most meaningful to them in their present and future environments. Functional activities are those skills or behaviors which are as real to life as possible and minimize the use of simulation. As an example, if the student in question has a skill deficit in communication, specifically in the area of initiating requests, it would be more advisable to teach this skill in the context of the natural environment (i.e., classroom, cafeteria, job site, leisure setting) as opposed to an isolated clinical room with a speech/language pathologist. As a result of utilizing such an approach

there are many benefits to the learner. Such benefits include the enhanced probability of generalization occurring on the part of the learner, the skill or activity is addressed as an integrated goal and objective on the part of teachers and related service providers, and is addressing an immediate need the student has in his/her present environment, or one which will be needed in future environments.

Consistent Cue Hierarchy

An effective instructional program for students with severe disabilities will utilize consistent instructional procedures. Such instructional procedures will include the use of a consistent cue or prompt hierarchy (Bates et al, 1981). Utilization of cues or prompt systems will maximize student performance and minimize errors. As Bates et al; (1981) suggest, cue or prompt systems will vary from individual to individual, but as a general rule, a teacher should select the least intrusive prompt that will promote independence and success on the part of the learner in performing the task. Cue or prompt systems should clearly specify the system and how it is to be used. As an example, will it be a system of least to most prompts? If so, what are the level of prompts? One format which could be used when teaching a task to a learner with a severe disability

is to allow for independent performance by the learner, allow 3-5 seconds to elapse before initiating an indirect verbal cue (e.g., whats next?), allow 3-5 seconds to elapse before iniating a direct verbal cue (e.g., pick up your tray); allow 3-5 seconds to elapse before iniating a direct verbal cue with gesture (e.g., teacher points with finger to the tray and says, "pick up your tray); allow 3-5 seconds to elapse before iniating a physical prompt (e.g., teacher physically assists student in picking up the tray). Such specificity of cue and prompt procedures is needed to promote the success of an instructional program when teaching learners with severe disabilities.

Systematic Data Based Instruction

As Williams et al; (1990) have described, the term systematic data based instruction refers to " schedules of daily activities, clearly defined objectives, reliably implemented instructional programs, and systematic data collection and analysis and that instructional decisions should be based upon documentation of student progress" (p.121). Such data based instruction is critical when attempting to evaluate student performance from an objective and criterion based approach. It alleviates subjective decision making, and provided charting is done on a daily basis promotes a daily check on student performance and

teacher effectiveness. Not only is the performance of the student monitored by such practices, but teachers can determine if their instructional delivery should be modified to promote enhanced performance on the part of the learner (Bates et al., 1981). If daily charting is logistically difficult for the teacher, a weekly probe format could be used, where performance data would be collected on a weekly basis on a targeted skill. The use of such practices will closely monitor student and teacher performance and strengthen the level of accountability.

Periodic Program Review

Bates et al., (1981) has referred to this as periodic revision of the IEP, and Williams et al., (1990) refer to it as systematic program evaluation. Basically, they refer to the same thing and that is regular review of the student's educational plan. As Bates et al., (1981) has indicated, program review should occur at shorter intervals due to the "high variability" of learning rates for children with severe disabilities. Annual review which is often the practice used by school districts and required by law may arbitrarily "lock" many children into goals and objectives which are no longer appropriate nor effective. Close scrutiny must be given to this process to facilitate student progress and effective delivery of services to the child.

It is recommended by Williams et al., (1990) " that such review include the entire staff and should provide staff members with information regarding the achievement of program goals; student progress; discrepencies needing remediation; directions for future programs change; and program impact upon students, their families and the community" (p.121).

Community-Based Instruction

Community-bsed instruction refers to instruction outside the classroom, and is a component of an appropriate education for learners with severe disabilities which must be included in the student's educational program. Community-based instruction includes such activities as shopping in grocery stores, working under the supervision of a job coach at job training sites, learning to use recreational facilities, preparing meals at home, or utilizing public transportation. Such training activities prepare students for life beyond school by focusing on required life skills in their natural environments promoting generalization in the learner. With the movement toward inclusion of students with severe disabilities into general education settings a debate has arisen among professionals. At the center of the debate is whether or not full inclusion in general education settings is appropriate at the expense

of the learner having experiences in environments outside the traditional classroom. Brown, Schwarz, Udvari-Solner, Kampshroer, Johnson, Jorgenson, and Gruenewald, (1991) believe that if students with severe disabilities will be expected to function in integrated environments once out of school then while in school they should receive formal training to prepare them adequately to assume such roles. Such decisions regarding the extent of community based training should ultimately be made based upon the individual needs of the learner.

Brown et al., (1991) offer some considerations when combining inclusion and community-based instruction for learners with severe disabilities. These considerations include: (a) the chronological age of the student; (b) the nature of the related services received by the student; (c) the number of environments in which a student functions; (d) personnel qualities; (e) effects on social relationships; (f) parent/guardian/student priorities; (g) probability of skill acquisition; (h) functionality; and (h) preparation for postschool life. As stated earlier, community-based instruction is as much a realistic need for learners with severe disabilities is inclusion within general education settings. The extent to which one or the other is programmed for the learner must be carefully considered and

based upon the needs of the learner and not because of professional or philosophical bias. The guidelines offerred by Brown et al., (1991) serve as a protocol to adhere to when making such important programmatic decisions.

Integrated Delivery of Related Services

This component of an appropriate education for learners with severe disabilities refers to an integrated delivery of related services such as physical therapy, occupational therapy, and speech/language therapy. As Williams et al., (1990) indicate a student's IEP should reflect the integrated instruction on educational and related service goals. The rationale for this is to avoid fragmentation of goals for the student. It is common for children with severe disabilities to receive many related services such as physical and occupational therapy due to many having multiple disabilities. It is viewed as more adventatious to overlap such goals across team members which focus intensely on the most pressing needs of the child in an effort to maximize efficient use of instructional time. Giangreco, Cloninger, and Iverson (1990) have offerred a systematic method of assessment (i.e., C.O.A.C.H. Version 6.0) for children with severe disabilties which promotes integrated service delivery and goal overlapping.

Interactions with Nondisabled Peers

Social and interpersonal interactions between students with severe disabilities and non-disabled same aged peers is a desired quaility of an educational program for students with severe disabilities. Not until recently has the opportunity for such social interactions been probable due to many children with severe disabilities receiving their education in segregated enviornments. Inclusion has promoted this practice since it is far more probable that social interactions will occur between students with severe disabilities and their nondisabled peers if they attend the same schools. There have been recent attempts in the research literature to aid in our understanding of how nondisabled children feel about students with severe disabilities and how professionals can better facilitate inclusion.

Schnorr (1990) conducted a qualitative investigation which involved interviews and observations of a first grade class which had as a part-time member a child with moderate mental retardation. The results indicated that there was a discrepency in how nondisabled children felt about "Peter" the student with moderate mental retardation who was only a class member on a part-time basis. Such things as relationship building, friendship, and a sense of belonging

are important questions which may not be addressed by part-time inclusion. As such relationships are established at school, there will be a greater liklihood that such interactions will occur in settings away from school such as in neighborhoods and other community settings. The relationship building which can occur through inclusion does not only enhance the lives of students with severe disabilities, but can also have a positive impact in the lives of students who are nondisabled.

Peck, Donaldson, and Pezzoli (1990) studied 21 nondisabled high school students about the benefits they had experienced as a result of developing relationships with students who had moderate or severe disabilities. These benefits included (a) improvements in self-concept, (b) growth in social cognition, (c) increased tolerance of others, (d) reduced fear of human differences, (e) development of personal principles, and (f) interpersonsla cceptance and friendship. The results of this study although limited provide us with positive evidence of the benefits of inclusive schooling for fostering relationships between students with severe disabilities and their nondisabled same aged peers.

Transition Planning

Transitions ae an important part of life and include such things as changing schools and building new relationships which can produce disruption and stress (Will, 1984). At each stage of education for a child with severe disabilities transition planning should occur. This includes movement from early childhood special education to elementary school, elementary to high school, and high school to adult services (Williams et al., 1990). Formal transition planning should take place in each of these enviornments prior to movement and each child's IEP should have objectives in the area of transition. Longitudinal goals and objectives are very important when devising the educational plan for a child with a severe disability. If efforts can be made to provide follow-up as the student transitions between programs successful transition becomes a more realized outcome.

Components of an effective transition planning process include (a) organizing a transition planning team, (b) addressing the area of transition at the student's IEP meeting, (c) implementing goals and objectives which will address both the immediate and future needs of the student, (d) conduct an exit meeting prior to a move which will promote communication between parents, professionals, and

programs, and (e) ensure follow-up once the student has transitioned to the next environment. Such a planning process places a value on preparing the student with the skills he/she will need not only to function in his/her immediate environment but in future environemnts. It also ensures accountability within an educational program by preparing for measurable outcomes which will have a planned and direct impact on the student's life while in school and beyond school.

Home-School Partnership

Parent involvement in each student's education is by far the most important component of an appropriate education for learners with severe disabilities. As protected by law, parents must have the opportunity to particpate actively in the development of their child's IEP and the delivery of educational and related services (Williams et al., 1990). School districts must have clearly defined methods for facilitating communication with parents and providing parents with information.

One very effective method for involving parents in the IEP planning process is through the use of the C.O.A.C.H. (Cayuga-Onondaga Assessment for Children with Handicaps) Version 6.0 developed by Giangreco et al., (1990). The

C.O.A.C.H. Version 6.0 is an assessment and planning tool which is designed to develop relevant educational programs in integrated settings. One of the many positive aspects of this assessment device is the priority it places on parental input in the development of the student's IEP. The major purpose of the C.O.A.C.H. in the pre-assessment stage is to discern family priorities for the education of their child. Only though maximizing parental involvement in the educational process of students with severe disabilities do we as professionals fully understand the needs of the child within the context of their families. The development of a home-school partnership will place a greater priority on the "total child" and not simply the child while he/she is in school.

The need for family involvment in the educational planning of the child is well addressed by Giangreco et al., (1990) in six major beliefs: (a) families know certain aspects of their children better than anyone else, (b) families have the greatest vested interest in seeing their children learn, (c) families are likely to include the only adults involved with their children's educational/therapeutic program throughout the entire school year, (d) famililies have access to information about their children in home and community settings to which others have

no access, (e) families have the ability to positively influence the quality of educational service provided in their community, and (f) families must live with the outcomes of decisions made by educational/therapeutic teams 24 hours a day, 365 days a year.

Part II

Assessment of Learners with Severe Disabilities

It has been a common practice in the field of special education to classify students with disabilities based on the outcomes derived from standardized tests. The information derived from such instruments has failed to provide useful information where students with severe disabilities are concerned (Brown, 1987). In order to fully maximize the assessment process with learners who experience severe disabilities a variety of measures must be used to identify the individual needs of the student and level of disability.

One method of informal assessment which is designed specifically for students with severe disabilities is the ecological inventory strategy. The ecological inventory or "top down" (Brown, et al., 1979) is a systematic method used to identify the skill demands found in the student's present or future environments. These skill demands once

identified, become the source of the curriculum content and in determining the training needs of the student (Brown, 1987). The postive characteristics of this approach is that it focuses on functional, age appropriate skills which are required in the school, home, community, recreational/leisure, and work environments of the student. There are six basic components of an ecological inventory as identified by Wehman, Renzaglia, and Bates (1985). These include:

1. Identify curriculum doamins (school, home, community, recreation/leisure, and work environments);
2. Identify and survey current and future natural environments;
3. Delineate these environments into sub-environments;
4. Inventory these sub-environments for the essential skills required of these environments;
5. Determine which of these skills the student can presently perform;
6. Prioritize the skills that the student cannot

perform from most important to teach to least important.

As a result of such a comprehensive analysis a fucntional curriculum is derived which will result in the prioritization of training goals (Brown, 1987). There are numerous guides to conducting ecological assessment for students with severe disabilities. One of the most practical and comprehensive of these guides is the C.O.A.C.H. Version 6.0 developed by Giangreco et al., (1990). This comprehensive assessment and planning instrument is designed to assist in developing educational programs for students with severe disabilities in integrated settings (Giangreco et al., 1990). As stated by Giangreco et al., (1990),

> the C.O.A.C.H. is devided into three Levels of Assessment and Planning - General, Refined, and Ongoing. The tool provides methods to : (a) determine a student's top learning priorities from a family-focused perspective; (b) translate priorities into goals; (c) determine the breadth of curriculum beyond the top priorities; (d) to identify management needs related to instruction; (e) develop short-term objectives, and (f) plan for meeting learning and management needs within general education schedules and routines" (p.1).

Another example of an ecological assessment instrument is the T.A.C.T. (Technology-Assisted Contigency Training) assessment and program planning instrument for learners with severe disabilities utilizing simple technology

(1988 CMECSU). Basically the T.A.C.T. is a framework for conducting an ecological assessment to determine how simple technology (i.e., switches, battery operated toys or electrical appliances, and micrecomputers) might be used as instructional or interactive tools to facilitate learning or participation by learners with severe disabilities.

Transdiciplinary Model

Assessment of students with severe disabilities has traditionally been administered by multidisciplinary or interdisciplinary teams. The drawback to such approaches is that individual assessments are performed by individual team members by discipline and often lead to the development of goals which are discipline specific (Orelove & Sobsey, 1987). As stated earlier one aspect of an appropriate education for learners with severe disabilities is the practice of integrated therapy. One method which has been proposed more recently to facilitate such an integrated model of assessment and therapy is the transdisciplinary approach (Orelove & Sobsey, 1987). Often when utilizing the transdisciplinary model, individual assessments by specific discipline areas are conducted (i.e., speech/language, physical and/or occupational therapy), however with this approach team members reconvene and discuss training

priorities and establish goals and objectives for the student in a collaborative manner (Orelove & Sobsey, 1987).

Some of the potential benefits of a transdciplinary model for goal formation and delivery of services are that the learners ability to demonstrate skill acquisition, maintenance, and generalization are enhanced. Another benefit is that therapy and related services are integrated except in special circumstances where the health and dignity of the child would clearly be best served by receiving therapy and related services in clinical confines such as a nurses room. Lastly, the benefits of the transdisciplinary model promotes efficiency of interventions and follow-up (Giangreco, York, & Rainforth, 1989).

PART III

Modifications Designed to Facilitate Inclusion

Classroom and Instructional

When attempting to educate learners with severe disabilities into general education settings it is quite apparent that certain modifications will be necessary. These modifications are usually specific to the classroom enviornment and instructional procedures.

Classroom modifications are determined by the needs of the children served. The teacher must take into consideration the accessibility of the room and facilities. Are there any architectural barriers for students confined to wheelchairs or for students who use walkers? Does the physical arrangement of the room allow for students to freely access desks, aisles, and all areas of the room. Other modifications may include selective seating assignments. These may include placing students with sensory losses (vision and hearing) at the front of the room.

Another issue related to classroom modifications is for teachers and related service personnel to be familiar with the specialized needs of students with severe disabilities. Balukas, Lepelstat, and Sulner (1990) of the New York City Board of Education provide some guidelines when serving children with severe disabilities who are also medically fragile in general education settings. These include: (a) type(s) of medication the student is currently taking, (b) seizures - including the history of seizure activity, pre and post seizure indicators, frequency and dutration of seizure, (c) immunization record, (d) toileting/catheterization - degree of independence the student has when toileting, toileting schedule, supervision

and assistance needed when the child is toileting, will assistance be male or female, adapted bathrooms, showers, furniture, change of clothing, and instruction for promoting independent functioning, (e) menses cycle - level of assistance needed, supplies, disposal, privacy, and instruction for promoting independent functioning, (f) nutritional and feeding needs - does the child self-feed or does the child need tube feeding, does the child have food allergies or restrictions in the diet, is supplemental feeding needed, (g) mode of communication - verbal, sign, communication board, or augmentative communication device, (h) mobility - is the child independent, walks with assistance, uses support devices (cane, crutches, walker, etc..), or is non-ambulatory (uses a wheelchair), (i) behavior - are there behavioral deficits or excesses, and (j) classroom assistance - the level of adaptive equipment and personal support needed to maintain the child in the general education setting.

Other forms of modification within the classroom which facilitate inclusion are described in the preceding section and are taken from Wheeler and Reetz (1991).

(a) Cooperative Learning - The instructional model in which students work together as a team to complete activities

or assignments (in contrast to competitive learning, in which each student works alone).

(b) Peer Buddies - One type of peer support network which is comprised of volunteer students who assist specific students through linking them with their social netowrk, assisting the student in acclimating to their school networks, and sharing with others the needs of the special friends.

(c) Peer Tutoring - When a student provides instruction to another student.

(d) Group Problem Solving - Involving the entire school in creating solutions to the inclusion of students with severe disabilities into the school.

(e) Creating School Support Networks - This involves creating support networks around the student with a disability to facilitate inclusion.

Summary

In attempting to educate learners with severe disabilities in general education settings the individual and diverse needs of the learner must be the foremost concern and from which the educational program is planned. To assume that due to the often extreme intellectual, physical, and behavioral disabilities often experienced by these children that these children cannot benefit from integrated education would be an injustice. These children need and desire the opportunity to engage in education in their community schools and to socialize and develop friends of the same age who may be disabled or nondisabled. Inclusion promotes such opportunities for all children.

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